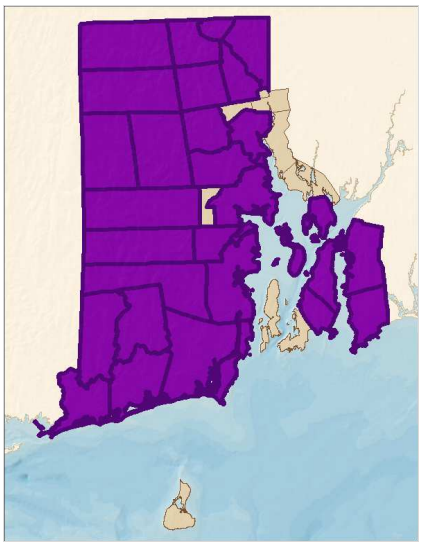
spotted salamander

AMPHIBIA
Amphibians

Ambystoma maculatum



Distribution & Abundance

This species is fairly widespread in the state and seems to have a better history of persistence in urban areas than nearly all other vernal pool amphibians. However, this species longevity may contribute to this perception of security and many isolated populations may already be in demographic stress. Several recent studies have shown this species to be sensitive to certain thresholds of forest canopy removal and other fragmentation processes. In addition to the habitats listed below, the spotted salamander also requires adjacent areas of upland forest as non-breeding habitat.

- Habitat Community: Seeps, Springs, Vernal Pools

Status

SRANK: S4, GRANK: G5. NEPARC: MC Northeast comprises <50% of US distribution: > 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Residential and commercial development; Habitat soils make sites highly preferred by developers

Actions:
- *Site/area protection; localized on the landscape*
- *Resource and habitat protection; some breeding sites protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology especially groundwater seepage, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Invasive and other problematic species and genes; Disease, bullfrogs, fish

Actions:
- *Awareness and communications; educating the public about the threats of releasing bullfrogs*
- *Compliance and enforcement; enforcing regulations prohibiting sale of bullfrogs*
- *Species management; monitoring and management*

Threat 5 - Climate change and severe weather; Sea level rise and drying of breeding sites

Actions: • *Law and policy; needed to address climate change*

marbled salamander

AMPHIBIA
Amphibians

Ambystoma opacum

Distribution & Abundance

This species is localized in Rhode Island and are indicators of high-quality amphibian habitats. They are common in certain rural western and southern portions of the state in forested habitat tracts greater than 400 hectares in extent. In addition to the habitats listed below, the marbled salamander also requires adjacent areas of upland forest as non-breeding habitat.

- Habitat Community: Seeps, Springs, Vernal Pools

Status

IUCN Rank: LC, SRANK: S2, GRANK: G5. RSGCN: L-H, PARC: 1, CODES: RES, Res/B: 1, GRP: 1, PRIOR: 1, NEPARC: HC Northeast comprises <50% of US distribution: > 50% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Residential and commercial development; Habitat soils make sites highly preferred by developers

Actions:
- *Site/area protection; localized on the landscape; some breeding sites protected*
- *Resource and habitat protection; Wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications should be used*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Land/water management; Identify priority parcels to retain as core forest areas with minimal management*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Invasive and other problematic species and genes; Disease, bullfrogs, fish

Actions:
- *Awareness and communications; educating the public about the threat of releasing bullfrogs*

- *Compliance and enforcement; enforcing regulations prohibiting sale of bullfrogs*
- *Species management; monitoring and management*

Threat 5 - Household sewage and urban waste water; Road runoff

Actions:
- *Site/area management; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*

Threat 6 - Climate change and severe weather; Sea level rise and drying of areas due to droughts

Actions:
- *Law and policy; needed to address climate change*

Threat 7 - Residential and commercial development; Loss of breeding habitat for amphibians

Actions:
- *Habitat and natural process restoration*

Fowler's toad

AMPHIBIA
Amphibians

Anaxyrus fowleri

Distribution & Abundance

Rhode Island is near the northern limit of this species range and their distribution is discontinuous. The core of the Fowler's Toad range is within Kent County, where habitats are threatened by ORV use and water withdrawals. Other coastal populations are small and vulnerable to rising sea level. Fowler's toads breed either in permanent wetlands or very shallow wetlands. Both systems can be affected by invasive species (primarily fish and bullfrogs) and changing hydrology. Dry sandy upland habitats used during the non-breeding season are degraded by ORV use.

Status

IUCN Rank: LC, SRANK: S3, GRANK: G5. RSGCN: L-H, PARC: 1, CODES: RES, Res/B: 1, GRP: 7, PRIOR: 1, NEPARC: HC Northeast comprises <50% of US distribution: > 50% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Preferred sandy soil type is also preferred by developers

Actions:
- *Site/area protection; localized on the landscape; some breeding sites protected*
- *Resource and habitat protection; Wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications should be used*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Habitat and natural process restoration; Construct and maintain new amphibian breeding habitat (seasonal pond project)*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; restore habitat where possible*

Threat 3 - Dams and water management/use; Water withdrawal

Actions:
- *Site/area protection; protect natural hydrology*
- *Site/area management; restore natural hydrology where possible*

Threat 4 - Recreational activities; ORV use

Actions:
- *Site/area management; fencing to protect habitat from ORV use*
- *Awareness and communications; need to educate the public about the threat of ORVs in the*

habitat

- *Compliance and enforcement; need for ORV restrictions in habitat*

Threat 5 - Invasive non-native/alien species; Release of non-native bullfrogs, fish predation of eggs and larvae, disease

Actions:
- *Awareness and communications; educating the public about the threat of releasing bullfrogs*
- *Compliance and enforcement; enforcing the regs prohibiting the sale of bullfrogs*
- *Species management; monitoring and management*

Threat 6 - Household sewage and urban waste water; Road run-off, road salt

Actions:
- *Site/area management; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat*
- *; 3. Species management*

Threat 7 - Climate change and severe weather; The drying of breeding areas due to drought, sea level rise

Actions:
- *Policies and regulations; needed to address climate change*

Threat 8 - Natural system modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify priority parcels needing seral-stage management, especially for Lepidoptera habitat*
- *3. Species management; Manage important habitats as required, especially for Lepidoptera habitat*
- *Habitat and natural process restoration; Develop fire prescriptions for priority parcels*
- *2.3 habitat and natrual process restoration; Implement burn management on priority parcels*

Northern dusky salamander

AMPHIBIA
Amphibians

Desmognathus fuscus


Chris Raithel

Distribution & Abundance

Populations of this species are scattered in southern and coastal Rhode Island but relatively common streamside inhabitant in the northwestern highlands. This semi-aquatic species depends on ground water inputs to streams and cold-water habitats, where they are often found with Brook Trout. Coastal populations are localized and at risk because of changing hydrology and stream scarification and fragmentation.

- Habitat Community: Seeps, Springs

Status

IUCN Rank: LC, SRANK: S4, GRANK: G5. RSGCN: H-L, PARC: 1, CODES: RES, Res/B: 1, GRP: 3, PRIOR: 1, NEPARC: LC Northeast comprises >50% of US/Canada distribution: < 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Degradation of streams, negatively modified near developed areas

Actions:
- *Site/area protection; localized on the landscape*
- *Resource and habitat protection; species depends on groundwater seepage*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Planning; Identify priority parcels to retain as core forest areas with minimal management*

Threat 2 - Household sewage and urban waste water; Road runoff, siltation, road salt, scarification of streambeds

Actions:
- *Resource and habitat protection; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*
- *Research, survey, inventory, monitor habitats; Assess effects of stream bank disturbance*

Threat 3 - Dams and water management/use; Water withdrawal and water restriction due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology especially groundwater seepage*
- *Habitat and natural process restoration; restore natural hydrology especially groundwater seepage, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Climate change and severe weather; Sea level rise and drying of breeding sites with drought

Actions:
- *Policies and regulations; needed to address climate change*

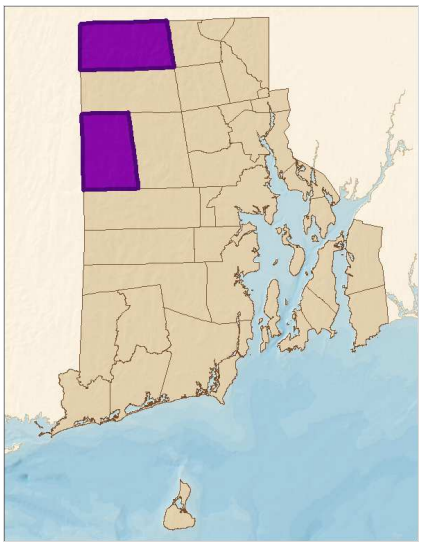
Threat 5 - Invasive non-native/alien species; Disease

Actions: • *Species management; monitoring and management*

Northern spring salamander

AMPHIBIA
Amphibians

Gyrinophilus porphyriticus porphyriticus



Distribution & Abundance

This species is uncommon and has a restricted distribution and localized habitat in Rhode Island. Of the four current sites in northwestern Rhode Island where it is known to occur only two sites are protected. This species occurs in small streams where there are ample inputs of cold groundwater. Loss of forest cover, stream scarification, and contamination are the principal threats.

- Habitat Community: Seeps, Springs

Status

STSTAT: C, SRANK: S1, GRANK: G5. RSGCN: H-M, NALCC: X, PARC: 1, CODES: RES, Res/B: 1, GRP: 4, PRIOR: 1, NEPARC: MC Northeast comprises >50% of US/Canada distribution: > 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Degradation of streams, negatively modified near developed areas

Actions:
- *Site/area protection; localized on the landscape*
- *Resource and habitat protection; species depends on groundwater seepage*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Land/water management; Identify priority parcels to retain as core forest areas with minimal management*

Threat 2 - Household sewage and urban waste water; Road runoff, siltation, road salt, scarification of streambeds

Actions:
- *Resource and habitat protection; protect the habitat from road run-off, work with RI DOT to limit salt use and stop siltation in habitat*
- *Site/area management; restore habitat where it can be restored*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology especially groundwater seepage*
- *Habitat and natural process restoration; restore natural hydrology especially groundwater seepage, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Climate change and severe weather; Sea level rise and drying of breeding sites with drought

Actions:
- *Law and policy; needed to address climate change*

Threat 5 - Invasive non-native/alien species; Disease

Actions: • *Species management; monitoring and management*

four-toed salamander

AMPHIBIA
Amphibians

Hemidactylium scutatum


Chris Raithel

Distribution & Abundance

It is difficult to confidently assign a status as there are more than 50 known localities in the state. Populations are clearly localized within the landscape but are secure on some protected and conservation properties.

- Habitat Community: Forested Swamp, Type: Red Maple Swamp

Status

IUCN Rank: LC, SRANK: S3, GRANK: G5. PARC: 1, CODES: RES, Res/B: 1, GRP: 5, PRIOR: 1, NEPARC: MC
Northeast comprises <50% of US distribution: > 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Loss of habitat

Actions:
- *Site/area protection; localized migratory species*
- *Resource and habitat protection; some evidence for persistence in suburban areas*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species life history, publish the Amphibians of Rhode Island*
- *Data collection and analysis; Identify priority parcels to retain as core forest areas with minimal management*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, look for opportunities to modify culverts, work with RI DOT*

Threat 3 - Dams and water management/use; Water flow can be restricted by culverts

Actions:
- *Resource and habitat protection; protect breeding wetlands, maintain existing hydrology, no dry outs or diverting stormwater to wetlands*
- *Habitat and natural process restoration; enhance degraded habitat where possible*
- *Habitat and natural process restoration; Construct and maintain new amphibian breeding habitat (seasonal pond project)*

Threat 4 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*

Threat 5 - Droughts; The drying of breeding sites due to drought

Actions: • *Policies and regulations; needed to address climate change*

Threat 6 - Residential and commercial development; Loss of riparian vegetation, fringe wetlands due to shoreline development, bulkheads, and poor urban development

Actions: • *Site/area protection; Wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications should be used*

Northern leopard frog

AMPHIBIA
Amphibians

Lithobates pipiens

Distribution & Abundance

This species is one of Rhode Island's most threatened amphibians because populations are extremely localized geographically and occur within rapidly developing landscapes. Road mortality has been an issue at many sites and the success of wildlife tunnels at one locality has not been determined. Breeding sites are ephemeral or semi-permanent ponds. Alternate habitats include wet meadows and marshes

- Habitat Community: Shrub Swamp

Status

IUCN Rank: LC, STSTAT: C, SRANK: S2, GRANK: G5. RSGCN: L-H, PARC: 1, CODES: RES, Res/B: 1, GRP: 8, PRIOR: 1, NEPARC: HC Northeast comprises <50% of US distribution: > 50% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Agriculture and aquaculture; Upland habitat highly developed for agriculture

Actions:
- *Site/area protection; large landscape species; also whereever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications whould be used*
- *Resource and habitat protection; breeding sites not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect wetlands and associated upland habitats*
- *Policies and regulations; need policies and regulations to protect wetlands and associated uplands*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Data collection and analysis; Research abundance and distribution of species for which status and habitat can be determined, by including additional data collection in present studies*

Threat 2 - Agricultural and forestry effluents; Pollution in breeding habitats from agriculture

Actions:
- *Site/area management; requires hayfields or grazing or mowing regimes, work with farmers*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*

Threat 5 - Droughts; Drying of breeding sites

Actions:
- *Policies and regulations; needed to address climate change*

Threat 6 - Natural system modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify priority parcels needing seral-stage management, especially for Lepidoptera habitat*
- *Species management; Manage important habitats as required*
- *Habitat and natural process restoration; Construct and maintain new amphibian habitat, and breeding habitat (seasonal pond project)*

Threat 7 - Lack of information; Lack of information from research to address habitat and taxonomic issues

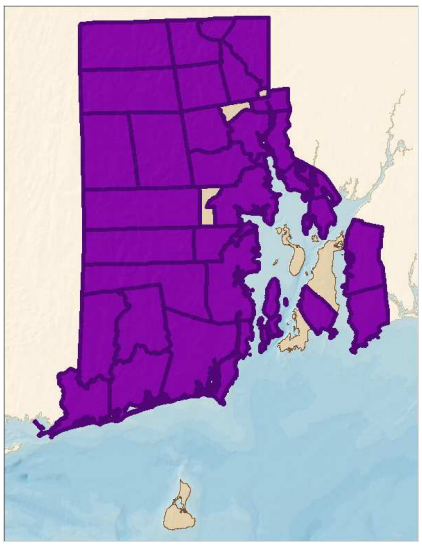
Actions:
- *Data collection and analysis; Assess taxonomy/population relationships*

Species of Greatest Conservation Need

wood frog

AMPHIBIA
Amphibians

Lithobates sylvaticus



Distribution & Abundance

This species is widespread in western and northern Rhode Island. However, near coastal areas and near human population centers this species is declining due to habitat loss and fragmentation. Several studies have shown that wood frog populations can be affected by loss of forest cover and other fragmentation processes. This is good indicator of the health of wildlife preserves. Breeding habitat is vernal ponds or semi-permanent pond. Alternate habitats include Red Maple Swamp and various forest types.

- Habitat Community: Forested Swamp, Type: Red Maple Swamp

Status

IUCN Rank: LC, SRANK: S5, GRANK: G5. PARC: 1, CODES: RES, Res/B: 1, GRP: 9, PRIOR: 1, NEPARC: LC
Northeast comprises >50% of US/Canada distribution: < 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Residential and commercial development; Habitat soils make sites highly preferred by developers

Actions:
- *Site/area protection; localized on the landscape*
- *Resource and habitat protection; some breeding sites protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Habitat and natural process restoration; Construct and maintain new amphibian breeding habitat (seasonal pond project)*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Invasive and other problematic species and genes; Disease, bullfrogs, fish

Actions:
- *Awareness and communications; educating the public about the threats of releasing bullfrogs*
- *Compliance and enforcement; enforcing regulations prohibiting sale of bullfrogs*

Threat 5 - Household sewage and urban waste water; Road runoff

Actions: • *Site/area management; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*

Threat 6 - Invasive non-native/alien species; Disease

Actions: • *Species management; monitoring and mangement*

Threat 7 - Climate change and severe weather; Sea level rise and drying of breeding sites, drought

Actions: • *Policies and regulations; needed to address climate change*

Threat 8 - Lack of information; Lack of information for monitoring and ongoing assessment

Actions: • *Data collection and analysis; Continue established long-term monitoring protocols (enhancing when necessary)*

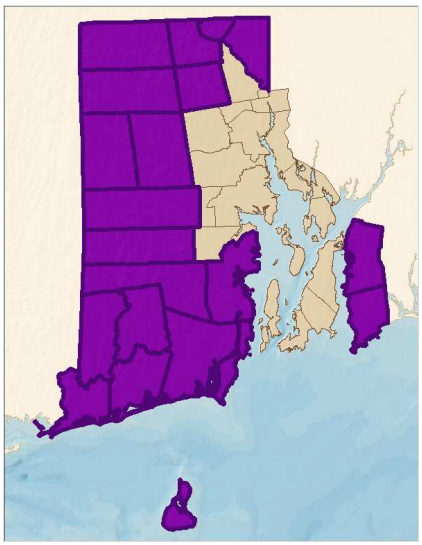
Threat 9 - Residential and commercial development; Loss of riparian vegetation, fringe wetlands due to shoreline development, bulkheads, and poor urban development

Actions: • *Site/area protection; Wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications should be used*

red-spotted newt

AMPHIBIA
Amphibians

Notophthalmus viridescens viridescens



Distribution & Abundance

This species is uncommon and localized in Rhode Island Breeding ponds are semi-permanent ponds that lack fish. Alternate habitat is a variety of large forest habitats.

Status

SRANK: S5, GRANK: G5. PARC: 1, CODES: RES, Res/B: 1, GRP: 2, PRIOR: 1, NEPARC: LC Northeast comprises <50% of US distribution: < 25% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Residential and commercial development; Habitat soils make sites highly preferred by developers

Actions:
- *Site/area protection; localized on the landscape*
- *Resource and habitat protection; some breeding sites protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*

Threat 2 - Roads and railroads; Road mortality in the migratory pathway

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible, look for opportunities to modify culverts, work with RI DOT*

Threat 4 - Invasive and other problematic species and genes; Disease, bullfrogs, fish

Actions:
- *Awareness and communications; educating the public about the threats of releasing bullfrogs*
- *Compliance and enforcement; enforcing regulations prohibiting sale of bullfrogs*
- *Species management; monitoring and management*

Threat 5 - Household sewage and urban waste water; Road runoff

Actions:
- *Site/area management; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*

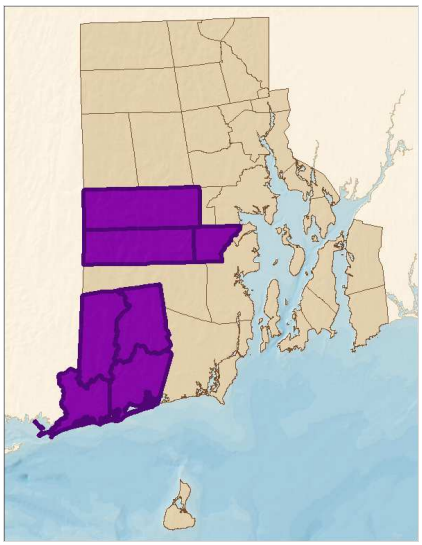
Threat 6 - Climate change and severe weather; Sea level rise and drying of breeding sites, drought

Actions: • *Policies and regulations; needed to address climate change*

Eastern spadefoot

AMPHIBIA
Amphibians

Scaphiopus holbrookii



Distribution & Abundance

Currently this species is known from only a few Island localities. This species has a very unusual breeding habitat that is not protected by existing regulations. It seems to be vulnerable to habitat fragmentation. No population presently known on protected land. Breeding habitat is very shallow ephemeral wetlands. Alternate habitat consists of dry forests, including Pitch Pine Woodland/Barrens.

- Habitat Community: Pitch Pine Woodland/Barrens

Status

IUCN Rank: LC, STSTAT: SE, SRANK: S1, GRANK: G5. RSGCN: L-VH, PARC: 1, CODES: RES, Res/B: 1, GRP: 6, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Preferred sandy soil type is also preferred by developers

Actions:
- *Site/area protection; area sensitive species, requires large landscape with multiple breeding sites*
- *Resource and habitat protection; breeding sites not protected, so identify breeding sites and protect them*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect wetlands and associated upland habitats*
- *Policies and regulations; need policies and regulations to protect wetlands and associated uplands*
- *Awareness and communications; need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island*
- *Habitat and natural process restoration; Construct and maintain new amphibian breeding habitat (seasonal pond project)*

Threat 2 - Roads and railroads; Road mortality and habitat fragmentation

Actions:
- *Habitat and natural process restoration; focal area/effective preserve size; restore natural migration routes; create breeding habitat; manage upland vegetation*

Threat 3 - Invasive non-native/alien species; Disease is an issue as are bullfrogs and upland vegetation

Actions:
- *Species management; monitoring and management*
- *Ex situ conservation ; head starting and captive breeding, one management action could be tadpole collection and rearing for recruitment purposes*

Threat 4 - Droughts; The drying of breeding sites due to drought

Actions:
- *Policies and regulations; climate change may cause drought so needed to address climate change*

Threat 5 - Natural systems modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify new parcels needing seral-stage management, especially for Lepidoptera habitat*
- *Species management; Manage important habitats as required, especially for Lepidoptera habitat*
- *Planning; Implement burn management on priority parcels*

Threat 6 - Lack of information

Actions:
- *Data collection and analysis; Research abundance and distribution of species for which status and habitat can be determined, by including additional data collection in present studies*

loggerhead turtle

REPTILIA
Reptiles

Caretta caretta

Distribution & Abundance

This species is the second-most common sea turtle to occur in Rhode Island waters, where it is found sparingly during late summer during late summer. Threats in Rhode Island water include entanglement in fishing gear.

- Habitat Community: Pelagic, Type: pelagic

Status

CITES: I, IUCN Rank: EN, FEDSTAT: FT, FED: NMFS, STSTAT: SE, SRANK: SNR, GRANK: G3. RSGCN: L-VH, CODES: M, MIG: 1, PELAG: 1, GRP: 10, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Temperature change)

Threats and Actions

Threat 1 - Fishing and harvesting aquatic resources; Bycatch issue

Actions:
- *Linked enterprises and livelihood alternatives; need to work with fishing industry and NMF to develop new gear*
- *Formal education; fishing industry needs to be trained about life history of species*
- *Policies and regulations; need to develop law and policies to protect the species*
- *3.4 ex situ conservation; rescue and rehab*
- *Data collection and analysis; research on modified fishing gear*

Threat 2 - Temperature extremes; Temperature extremes can increase strandings

Actions:
- *Law and policy; needed to address climate change*

Threat 3 - Shipping lanes; Propeller injuries

Actions:
- *Policies and regulations; need to explore enforcement of regulations*

Atlantic green turtle

REPTILIA
Reptiles

Chelonia mydas mydas

Distribution & Abundance

This species is a very rarely strays into Rhode Island waters. Threats are similar to other large marine species and include fishing gear entanglement.

- Habitat Community: Pelagic, Type: pelagic

Status

FEDSTAT: FT, FED: NMFS, STSTAT: SE, SRANK: SNR, GRANK: G3T3. CODES: M, MIG: 1, PELAG: 1, GRP: 11, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Temperature change)

Threats and Actions

Threat 1 - Fishing and harvesting aquatic resources; Bycatch issue

Actions:
- *Linked enterprises and livelihood alternatives; need to work with fishing industry and NMF to develop new gear*
- *Formal education; fishing industry needs to be trained about life history of species*
- *Policies and regulations; need to develop law and policies to protect the species*
- *3.4 ex situ conservation; rescue and rehab*
- *Data collection and analysis; research on modified fishing gear*

Threat 2 - Temperature extremes; Temperature extremes can increase strandings

Actions:
- *Law and policy; needed to address climate change*

spotted turtle

REPTILIA
Reptiles

Clemmys guttata


Chris Raithel

Distribution & Abundance

The Spotted Turtle is widespread and locally common in Rhode Island. As with most large reptiles, loss of adults via road mortality, collection, or predation is the most significant threat to populations. Primary wetland habitats are vulnerable to hydrological changes and succession, and breeding habitat also requires management.

- Habitat Community: Coastal Plain Peatlands, Type: Graminoid Fen

Status

IUCN Rank: EN, OTSTAT: P, SRANK: S5, GRANK: G5. RSGCN: L-VH, NALCC: X, PARC: 1, CODES: RES, Res/B: 1, GRP: 1, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Localized species with a specialized habitat, affected by habitat loss

Actions:
- *Research, survey, inventory, monitor populations; Determine metapopulation structure*
- *Resource and habitat protection; some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 4 - Human intrusions and disturbance; Moving turtles from original habitat (human)

Actions:
- *Awareness and communications; need to educate the public about moving animals and what it can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 5 - Dams and water management/use; Water withdrawals are an issue

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible*

Threat 6 - Problematic native species; Egg predation

Actions:
- *Site/area management; control predators*
- *Species management; Nesting area protection, monitoring, possible predator excludor cages for nests*

Threat 7 - Other ecosystem modifications; Plant succession limiting breeding habitat

Actions:
- *Site/area management; limit disturbance in nesting areas*
- *Invasive/problematic species control; eliminate vegetation*

Threat 8 - Household sewage and urban waste water; Road runoff

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*

Threat 9 - Climate change and severe weather; Changing hydrology

Actions:
- *Law and policy; need to address climate change*
- *Species management; monitoring and management*
- *Ex situ conservation ; headstarting and captive breeding*

Threat 11 - Lack of information; Lack of information formonitoring and on-going assessement

Actions:
- *Data collection and analysis; Continue established long-term monitoring protocols*
- *Planning; Incorporate data into management planning*

Threat 12 - Invasive non-native/alien species; Habitat loss and demographic changes from invasive species (vetetative and animal)

Actions:
- *Outreach; Develop and provide educational information about invasive species*
- *Planning; Develop and implement invasive species management program*

Threat 13 - Pollution; Habitat degradation from impairment of water quality

Actions:
- *Data collection and analysis; Assess effects of water withdrawals and prolonged drawdowns*
- *Data collection and analysis; Assess effects of sedimentation and evaluate water quality effects on priority species*
- *Data collection and analysis; Assess effects of stream bank distrubance*
- *Alliance and partnership development; Coordinate water quality protection with appropriate DOT, regional, and federal programs*
- *Habitat and natural process restoration; Construct and maintain new amphibian breeding hbitat (seasonal pond project)*
- *Planning; Develop strategies to mitigate aquatic degradation*

Northern black racer

REPTILIA
Reptiles

Coluber constrictor constrictor

Distribution & Abundance

This species is presently widespread and locally common in Rhode Island but is thought to be vulnerable to habitat fragmentation and adult mortality by auto traffic and other sources. Public education could mitigate mortality to some degree. Northern black racers are most commonly found living in dry woods and old fields.

Status

SRANK: S5, GRANK: G5T5. RSGCN: H-H, NEPARC: HC

> 50% of states listed in WAP,

- Climate Change Vulnerability: 2100

Northeast comprises >50% of US/Canada distribution:

Threats and Actions

Threat 1 - Housing and urban areas; Uses early successional habitat, developable land

Actions:
- *Site/area protection; area sensitive species*
- *Resource and habitat protection; some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Human intrusions and disturbance; Persecution of snakes by humans

Actions:
- *Awareness and communications; need to educate the public about the species' value and life history, publish the Reptiles of Rhode Island*

Threat 4 - Hunting and collecting terrestrial animals; Take of species from the wild

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 5 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*
- *Ex situ conservation ; headstart and captive breeding*

Species of Greatest Conservation Need

timber rattlesnake

REPTILIA
Reptiles

Crotalus horridus

Distribution & Abundance

This species was formerly known from one population in the highlands of Tiverton but has not been documented from that area since 1963and is considered extirpated from the state. Direct take of individuals was the cause of population loss. Former den sites have been found in ledges and talus slopes.

Status

SRANK: SX, GRANK: G4. RSGCN: L-VH, NEPARC: SC states listed in WAP,

- Climate Change Vulnerability: Unknown

Northeast comprises <50% of US distribution: > 75% of

Threats and Actions

leatherback turtle

REPTILIA
Reptiles

Dermochelys coriacea

Distribution & Abundance

The Leatherback turtle is the most common of the sea turtles to inhabit Rhode Island waters but is an uncommon transient during the late summer months. Threats are similar to other large marine species and include fishing gear entanglement.

- Habitat Community: Pelagic, Type: pelagic

Status

CITES: I, IUCN Rank: CR, FEDSTAT: FE, FED: NMFS, STSTAT: SE, SRANK: SNR, GRANK: G2. RSGCN: L-VH, CODES: M, MIG: 1, PELAG: 1, GRP: 14, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Temperature change)

Threats and Actions

Threat 1 - Fishing and harvesting aquatic resources; Bycatch issue

Actions:
- *Linked enterprises and livelihood alternatives; need to work with fishing industry and NMFS to develop new gear*
- *Formal education; fishing industry needs to be trained about life history of species*
- *Policies and regulations; need to develop law and policies to protect the species*
- *3.4 ex situ conservation; rescue and rehab*
- *Data collection and analysis; research on modified fishing gear*

Threat 2 - Shipping lanes; Propeller injuries

Actions:
- *Policies and regulations; need to explore enforcement of regulations*

Threat 3 - Temperature extremes; Temperature extremes can increase strandings

Actions:
- *Law and policy; needed to address climate change*

wood turtle

REPTILIA
Reptiles

Glyptemys insculpta


Chris Raithel

Distribution & Abundance

The wood turtle is widespread but uncommon and is found primarily in areas west of Narragnsett Bay. As with most large reptiles, loss of adults via road mortality, collection, or predation is the most significant threat to populations. Primary wetland habitats are vulnerable to hydrological changes and contamination, and breeding habitat also requires management. The wood turtle resides in clear, permanent streams during the winter and in their associated floodplains and various terrestrial habitats during the summer. They utilize open, scarified areas for egg-laying.

- Habitat Community: Pelagic, Type: pelagic

Status

CITES: II, IUCN Rank: EN, STSTAT: C, OTSTAT: P, SRANK: S2, GRANK: G3. RSGCN: H-VH, PARC: 1, CODES: RES, Res/B: 1, GRP: 2, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Localized species with a specialized habitat, negatively affected by habitat loss

Actions:
- *Research, survey, inventory, monitor populations; Determine metapopulation structure*
- *Resource and habitat protection; some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 4 - Human intrusions and disturbance; Moving turtles from original habitat (human)

Actions:
- *Awareness and communications; need to educate the public about moving animals and what it*

can do to the population
- *Compliance and enforcement; enforce compliance*

Threat 5 - Dams and water management/use; Water withdrawals are an issue

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; restore natural hydrology where possible*

Threat 6 - Problematic native species; Egg predation

Actions:
- *Site/area management; control predators*
- *Species management; Nesting area protection, monitoring, possible predator excludor cages for nests*

Threat 7 - Other ecosystem modifications; Plant succession limiting breeding habitat

Actions:
- *Site/area management; limit disturbance in nesting areas*
- *Invasive/problematic species control; eliminate vegetation*

Threat 8 - Household sewage and urban waste water; Road runoff

Actions:
- *Resource and habitat protection; protect natural hydrology*
- *Habitat and natural process restoration; protect the habitat from road run-off, work with RI DOT to limit salt use in habitat areas*

Threat 9 - Climate change and severe weather; Changing hydrology

Actions:
- *Law and policy; need to address climate change*

Threat 10 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*
- *Ex situ conservation ; headstarting and captive breeding*

Threat 11 - Invasive non-native/alien species; Habitat loss and demographic changes from invasive species (vegetative and animal)

Actions:
- *Outreach; Develop and provide educational information about invasive species*
- *Planning; Develop and implement invasive species management program*

Threat 12 - Pollution; Habitat degradation from impairment of water quality

Actions:
- *Alliance and partnershiop development; Coordinate water quality protection with appropriate DOT, regional, and federal programs*
- *Planning; Develop strategies to mitigate aquatic degradation*
- *Data collection and analysis; Assess effects of water withdrawals and prolonged drawdowns*
- *Data collection and analysis; Assess effects of sedimentation and evaluate water quality effects on priority species*
- *Data collection and analysis; Asess effects of stream bank disturbance*

Eastern hog-nosed snake

REPTILIA
Reptiles

Heterodon platirhinos

Distribution & Abundance

This species was formerly more widespread across Rhode Island, but now occurs primarily only in the western section of the state. This species is local and generally uncommon. It depends on robust amphibian populations as a source of food and is vulnerable to habitat fragmentation and increased mortality from traffic and other causes. Public education would help to mitigate mortality of adults.

- Habitat Community: Pitch Pine Woodland/Barrens

Status

IUCN Rank: LC, STSTAT: C, SRANK: S2, GRANK: G5. RSGCN: L-VH, NALCC: X (B), PARC: 1, CODES: RES, Res/B: 1, GRP: 6, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Localized species with a specialized habitat, negatively affected by habitat loss

Actions:
- *Site/area protection; large landscape species*
- *Resource and habitat protection; depends on robust amphibian population for food source, can benefit from selective forestry management/openings/successional habitat, work with foresters*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*
- *Habitat and natural process restoration; Restore habitats where toads occur*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Human intrusions and disturbance; Persecution of snakes by humans

Actions:
- *Awareness and communications; need to educate the public about the species' value and life history, publish the Reptiles of Rhode Island*

Threat 4 - Recreational activities; ORV use in the habitat

Actions:
- *Habitat and natural process restoration; protect habitat of toads, eliminate ORV use*
- *Awareness and communications; educate the public about species' habitat needs*
- *Compliance and enforcement; enforce ORV restrictions*

Threat 5 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 6 - Household sewage and urban waste water; Road runoff contamination and siltation

Actions:
- *Site/area management; protect habitat from chemical runoff, work with RI DOT*
- *Habitat and natural process restoration; restore habitats where possible*

Threat 7 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*
- *Ex situ conservation ; headstarting and captive breeding*

Threat 8 - Natural system modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify priority parcels needing seral-stage management*
- *Habitat and natural process restoration; Develop fire prescriptions and implement burn management on priority parcels*
- *Species management; Manage important habitats as required*

Threat 9 - Invasive non-native/alien species; Habitat loss and demographic changes from invasive species (vegetative and animal), specifically aquatic invasives

Actions:
- *Technical assistance; Coordinate aquatic exotic management with stocking agencies and insect abatement personnel*
- *Data collection and analysis; Assess threat from fish and investigate feasibility of altering hydrology of certain wetlands*
- *Invasive/problematic species control; Develop and implement program to mitigate effect of aquatic exotics*
- *Outreach; Develop and provide educational information about invasive species*
- *Planning; Develop and implement invasive species management program*

Threat 10 - Lack of information; Collect data from which status and habitat of species can be determined

Actions:
- *Research, survey, inventor, monitor populations; Research abundance and distribution of species for which status and habitat can be determined, by including additional data collection in present studies*
- *Research, survey, inventory, monitor, habitats; Evaluate existing significant hibernacula*

Kemp's ridley turtle

REPTILIA
Reptiles

Lepidochelys kempii

Distribution & Abundance

This species is a consistent but uncommon stray into Rhode Island marine waters during late summer. Threats are similar to other large marine species and include fishing gear entanglement.

- Habitat Community: Pelagic, Type: pelagic

Status

CITES: I, IUCN Rank: CR, FEDSTAT: FE, FED: NMFS, STSTAT: SE, SRANK: SNR, GRANK: G1. RSGCN: L-VH, CODES: M, MIG: 1, PELAG: 1, GRP: 13, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Temperature change)

Threats and Actions

Threat 1 - Fishing and harvesting aquatic resources; Bycatch issue

Actions:
- *Linked enterprises and livelihood alternatives; need to work with fishing industry and NMFS to develop new gear*
- *Formal education; fishing industry needs to be trained about life history of species*
- *Policies and regulations; need to develop law and policies to protect the species*
- *3.4 ex situ conservation; rescue and rehab*
- *Data collection and analysis; research on modified fishing gear*

Threat 2 - Temperature extremes; Temperature extremes can increase strandings from cold stunning

Actions:
- *Law and policy; needed to address climate change*

Threat 3 - Shipping lanes; Propeller injuries

Actions:
- *Policies and regulations; need to explore enforcement of regulations*

Northern diamond-backed terrapin

REPTILIA
Reptiles

Malaclemys terrapin terrapin

Distribution & Abundance

The Northern diamond-backed terrapin is Rhode Island's only reptile that inhabits brackish water. This species is extremely localized in the state, with one large population known and perhaps other smaller outliers. Like most large reptiles, this species is especially vulnerable to loss of adults through propeller strikes and fishing (especially pot fisheries) bycatch. Predation of eggs and young by subsidized predators is another issue. The single existing large population is well managed and monitored but there could be other conservation action directed to outlying areas. Their nesting habitat is sand barrens and beaches near tidal waters.

- Habitat Community: Salt Marsh

Status

IUCN Rank: NT, SRANK: S1, GRANK: G4. RSGCN: H-VH, PARC: 1, CODES: RES, Res/B: 1, GRP: 3, PRIOR: 1, NEPARC: SC Northeast comprises >50% of US/Canada distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Temperature change)

Threats and Actions

Threat 1 - Fishing and harvesting aquatic resources; Bycatch issue

Actions:
- *Linked enterprises and livelihood alternatives; need to work with fishing industry and NMF to develop new gear*
- *Formal education; fishing industry needs to be trained about life history of species*
- *Policies and regulations; need to develop law and policies to protect the species*
- *Site/area management; area restrictions*

Threat 2 - Roads and railroads; Road mortality during breeding season

Actions:
- *Site/area management; management of breeding sites (need to limit dogs and humans)*
- *Habitat and natural process restoration; restore habitat where it can be restored*
- *Education and awareness; brochures educating the public about turtles on the road*
- *Law and policy; Minimize the loss of habitats as much as possible*

Threat 3 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 4 - Human intrusions and disturbance; Moving turtles from original habitat (human)

Actions:
- *Awareness and communications; need to educate the public about moving animals and what it can do to the population*

- *Compliance and enforcement; enforce compliance*

Threat 5 - Problematic native species; Egg predation

Actions:
- *Invasive/problematic species control; control predators*
- *Ex situ conservation ; headstart and captive breeding*
- *Species management; Nesting area protection, monitoring, possible predator excludor cages for nests*

Threat 6 - Recreational activities; Propeller injuries

Actions:
- *Policies and regulations; need to explore enforcement of regulations*

Threat 7 - Climate change and severe weather; Flooding of marshes and coastline

Actions:
- *Law and policy; needed to address climate change*

Eastern ratsnake

REPTILIA
Reptiles

Pantherophis alleganiensis

Distribution & Abundance

The rat snake only occurs in a limited area of Rhode Island and is considered to be at the periphery of its range here. However, like most large snakes, it is vulnerable to increased mortality of adults via auto traffic. Public information would help to mitigate the loss of adults. They use ledges and outcrops for den sites and basking.

- Habitat Community: Oak Forest

Status

STSTAT: C, SRANK: S2, GRANK: G5. PARC: 1, CODES: RES, Res/B: 1, GRP: 5, PRIOR: 1, NEPARC: MC Northeast comprises <50% of US distribution: > 25% of states listed in WAP,

- Climate Change Vulnerability: 2100

Threats and Actions

Threat 1 - Residential and commercial development; Uses early successional habitat, developable land

Actions:
- *Research, survey, inventory, monitor populations; Determine metapopulation structure*
- *Land/water protection; area sensitive species, and some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Human intrusions and disturbance; Persecution of snakes by humans

Actions:
- *Awareness and communications; need to educate the public about the species' value and life history, publish the Reptiles of Rhode Island*

Threat 4 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 5 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*

- *Ex situ conservation ; headstart and captive breeding*

woodland box turtle

REPTILIA
Reptiles

Terrapene carolina carolina

Distribution & Abundance

Eastern Box turtles are widespread in Rhode Island but are only locally common and are extremely vulnerable to the effects of habitat fragmentation. Like most large long-lived reptiles, this species is particularly sensitive to the loss of adults. Habitat management to maintain brushy fields is also important. They utilize sandy forest opening for nesting sites.

- Habitat Community: Oak Forest

Status

OTSTAT: P, SRANK: S4, GRANK: G5T5. RSGCN: L-VH, PARC: 1, CODES: RES, Res/B: 1, GRP: 4, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Precipitation change)

Threats and Actions

Threat 1 - Residential and commercial development; Habitat preferred by developers

Actions:
- *Research, survey, inventory, monitor populations; Determine metapopulation structure*
- *Land/water protection; area sensitive species, and some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify road crossing areas, work with RI DOT*

Threat 3 - Hunting and collecting terrestrial animals; Take of species from the wild (human)

Actions:
- *Awareness and communications; need to educate the public about the damage that removal from the wild can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 4 - Human intrusions and disturbance; Moving turtles from original habitat (human)

Actions:
- *Awareness and communications; need to educate the public about moving animals and what it can do to the population*
- *Compliance and enforcement; enforce compliance*

Threat 5 - Problematic native species; Egg predation

Actions:
- *Site/area management; control predators*
- *Species management; Nesting area protection, monitoring, possible predator excludor cages for nests*

Threat 6 - Other ecosystem modifications; Plant succession limiting breeding habitat

Actions:
- *Site/area management; limit disturbance in nesting areas*
- *Invasive/problematic species control; eliminate vegetation*
- *Data collection and analysis; Identify priority parcels needing seral-stage management, especially for Lepidoptera habitat*
- *Habitat and natural process restoration; Develop fire prescriptions and implement burn management on priority parcels*
- *Species management; Manage important habitats as required, especially for Lepitoptera habitat*

Threat 7 - Invasive non-native/alien species; Disease

Actions:
- *Species management; monitoring and management*
- *Ex situ conservation ; headstarting and captive breeding*
- *Outreach; Develop and provide educational information about invasive species*
- *Planning; Develop and implement invasive species management program*

common ribbonsnake

REPTILIA
Reptiles

Thamnophis sauritus sauritus

Distribution & Abundance

The ribbon snake is widespread but is uncommon and quite localized. Its habitat requirements in this area are poorly known but thought to depend on high quality wetlands that have robust amphibian populations. Like most snakes, mortality from auto traffic is one of the greatest threats to populations

- Habitat Community: Coastal Plain Peatlands, Type: Graminoid Fen

Status

STSTAT: C, SRANK: S3, GRANK: G5. RSGCN: L-VH, PARC: 1, CODES: RES, Res/B: 1, GRP: 7, PRIOR: 1, NEPARC: SC Northeast comprises <50% of US distribution: > 75% of states listed in WAP,

- Climate Change Vulnerability: 2050 (Precipitation change)

Threats and Actions

Threat 1 - Housing and urban areas; Localized species with a specialized habitat, affected by habitat loss

Actions:
- *Land/water protection; Depends on robust amphibian populations for food source; Construct new and maintain amphibian habitat, including breeding habitat (seasonal pond project)*
- *Site/area management; some habitat not protected*
- *Alliance and partnership development; development of conservation partnerships will be necessary to protect habitat*
- *Policies and regulations; need policies and regulations to protect habitat*
- *Awareness and communications; need to educate the public about habitat loss and the species' life history, publish the Reptiles of Rhode Island*
- *Research, survey, inventory, monitor populations; Determine metapopulation structure*

Threat 2 - Roads and railroads; Road mortality

Actions:
- *Habitat and natural process restoration; develop or facilitate passage through the landscape, modify culverts, work with RI DOT*

Threat 3 - Human intrusions and disturbance; Persecution of snakes by humans

Actions:
- *Awareness and communications; need to educate the public about the species' value and life history, publish the Reptiles of Rhode Island*

Threat 4 - Household sewage and urban waste water; Road runoff

Actions:
- *Site/area management; protect habitat from chemical runoff, work with RI DOT*
- *Habitat and natural process restoration; restore habitat from chemical runoff where possible*

Threat 5 - Invasive and other problematic species and genes; Disease

Actions:
- *Species management; monitoring and management*

- *Ex situ conservation ; headstart and captive breeding*

Threat 6 - Natural system modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify priority parcels needing seral-stage management, especially for Lepidoptera habitat*
- *Habitat and natural process restoration; Develop fire prescriptions and implement burn management on priority parcels*
- *Species management; Manage important habitats as required, especially for Lepidoptera habitat*

Threat 7 - Pollution; Habitat degradation from impairment of water quality

Actions:
- *Data collection and analysis; Assess effects of water withdrawals*

Threat 8 - Residential and commercial development; Loss of riparian vegetation, fringe wetlands due to shoreline development, bulkheads, and poor urban development

Actions:
- *Site/area protection; Wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modificaiton should be used*